#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-011502 Address: 333 Burma Road **Date Inspected:** 11-Jan-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Li Yang and Wu Zhi Cheng No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG** Trail Assembly

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Deck Panel "I" Stiffener Cross Beam side for Segment 6BW to 6CW. Weld identified as DP514-001-007. The welder was identified as 066481. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-3213-B-U3b. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6BW

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Longitudinal Diaphragm Cross Beam Side for Segment 6BW. Weld identified as SEG029C-001, SEG029C-009, SEG029C-011, SEG029C-0052, SEG029C-040/041 and SEG029C-007/008. The welder was identified as 220067. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.

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e., WPS-B-T-2132, WPS-B-T-2233-Tc-U4b-F, and WPS-B-T-2232-Tc-U4b-F. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel Counter Weight side for Segment 6BW to 6CW the welding has been completed form inside and carbon arc gouged form external due to lack of penetration at 8(Eight) Locations. Weld identified as OBW6C-002. The welder was identified as 068764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel Corner Assembly Counter Weight side for Segment 6BW to 6CW the welding has been completed form inside and carbon arc gouged form external due to lack of penetration at 5(Five) Locations. Weld identified as OBW6C-002. The welder was identified as 068764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 5CW

This QA Inspector observed ZPMC personnel at Segment 5CE at PP 35 Bottom Panel Floor Beam to Floor Beam Traveler Rail angle bracket installation is in progress.

Segment 6AW to 6BW

This QA Inspector observed ZPMC personnel at Segment 6AW to 6BW between PP 40 and 41 U-Rib to U-Rib internal splice plate installed and match drilling has been in progress and for Bottom Panel T-Rib to T-Ribs match drilling was in progress.

Segment 6CE

This QA Inspector observed ZPMC personnel at Segment 6CE at PP 44, PP 45, PP 46 and PP47 for Lower Chevron Temporary bolts removed and faying surface between Splice Plate to the Box section been cleaned and ASTM A 325 Grade bolts installation was in progress.

Segment 6CE to 7AE

This QA Inspector observed ZPMC personnel at Segment 6CE to 7AE between PP 47 and PP 48 hold back welded area grinding was in progress.

Segment 6CE

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This QA Inspector observed ZPMC personnel at Segment 6CE from PP 44 to PP 47 Corner Assembly bike path side back to back angle post truss installation was in progress.

Segment 6BE to 6CE

This QA Inspector observed ZPMC personnel at Segment 6BE to 6CE between PP 43 to PP 44 match drilling for T-Ribs to T-Ribs at Bottom Panel as well at U-Ribs to U-Ribs match drilling was in progress.

Segment 6CE

This QA Inspector observed ZPMC personnel at Segment 5AE to 5BE between PP 31 and PP 32 Cross Beam side road barrier X37A weld MT been performed by ZPMC QC.

Segment 6BW

This QA Inspector observed ZPMC personnel at Segment 6BW at PP 41 Suspender Bracket installed and stiffener connection side panel corner assembly and deck panel tack welding (fit-up) is in progress along with suspender bracket.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### **Summary of Conversations:**

No relevant conversations.

#### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

| <b>Inspected By:</b> | Math, Manjunath | Quality Assurance Inspector |
|----------------------|-----------------|-----------------------------|
| Reviewed By:         | Miller,Mark     | QA Reviewer                 |